



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Keith L. Eichhorn

Serial No.: 09/851,056

Filed: March 2, 2001

Confirmation No.: 2891

For: **GLASS PANEL WITH SIMULATED METAL STRIP (Divisional)**

Examiner: John L. Goff

Group No.: 1733

Assistant Commissioner for Patents

Washington, DC 20231

Attention: Board of Patent Appeals and Interferences

Sir:

**APPELLANT'S BRIEF PURSUANT TO 37 CFR 1.192**

This brief is in furtherance of the Notice of Appeal filed in this case on October 28, 2003.

A check is enclosed in the amount of \$165.00 representing the brief fee. If any additional fees for the accompanying Appeal Brief are required, Appellant requests that this be considered a petition therefor. The Commissioner is hereby authorized to charge any additional fees which may be required to Deposit Account No. 09-0528.

This brief is transmitted *in triplicate*.

By a separate paper filed contemporaneously herewith, Appellant has requested an oral hearing.

**I. REAL PARTY IN INTEREST**

The real party in interest in this appeal is Glass Unlimited of High Point, Inc. of High Point, North Carolina.

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## **II. RELATED APPEALS AND INTERFERENCES**

There are no appeals or interferences known to Appellant or Appellant's legal representative which will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal.

## **III. STATUS OF CLAIMS**

The claims remaining in the application are 15 and 17-19 and are reproduced in the Appendix hereto.

## **IV. STATUS OF AMENDMENTS**

There have been no amendments filed subsequent to the Examiner's final rejection.

## **V. SUMMARY OF INVENTION**

Applicant's invention is directed to an economical method of forming simulated raised strips of metal on at least one surface of a glass panel. The invention departs from the more traditional and expensive approach in that raised beads of acrylic resin covered by metal foil are applied, rather than actually applying raised beads of metal.

The look of strips of metal is achieved by first applying the raised bead of acrylic resin in a desired pattern on the surface of a single glass panel (Page 5, Lines 10-19). The resin is air cured. A metal film is then applied over the crown of the raised bead of resin to complete the simulated metal strip (Page 5, Line 20 through Page 6, Line 2). This differs from other metal decorating techniques in which a relatively thin flat ink is applied to a glass panel then covered with a metal foil.

The word “bead” is defined in Webster’s Third New International Dictionary to mean “a projecting rim, band, or molding; a small salient molding of rounded surface, continuous or broken, the section usually being an arc of a circle.” This differs considerably from the definition of the word “film” which is defined by Webster’s Third New International Dictionary to mean “an exceedingly thin layer”.

Applicant submits that it is this “bead” of resin which, when covered by a film of aluminum or chrome metal, simulates a raised “bead” of metal. This is not achieved by the prior art which applies a thin layer or “film” of ink, typically by painting or silk-screening, which is then covered with some metallic layer. The look is entirely different. It is the raised and rounded profile of the resin bead that gives the look of an actual metal strip having a perceptible raised thickness. Accordingly, Applicant’s invention provides a simulated rounded metal strip for adorning glass panels which has the appearance of the previously formed solid metal bead or strip, but which is much less expensive to produce than the solid metal approach.

This inventive concept is entirely different from the references cited by the Examiner. The European ’354 Patent (Kamen et al.) “silk screens” or “paints” a thin layer or film of adhesive ink to glass (Page 2, Lines 44-48), then compresses a metallic foil against the adhesive ink layer (Page 2, Lines 41-43). The Kamen et al. reference is actually used to decorate bottles, dishes, and glasses. Similarly the Hirahara ’344 Patent is also directed to a process in which a thin layer of ink is “silk screened” onto glass, then covered with foil (Col. 1, Line 53 through Col. 2, Line 4). Neither of these processes results in a “raised bead” at least 0.8 mm above the glass surface. The Kume et al. ’365 Patent is even further removed from Applicant’s inventive method. It is directed to a process for applying ink to a label substrate comprising an inorganic powder shaped in a sheet form (Abstract).. It is not a process for applying a bead to a glass

panel. Similarly, the Burzlaff et al. '970 Patent is directed to a method for printing and adhering foil to plastic tubes. Lastly, the Preisler et al. '662 Patent is also directed to providing a foil-covered plastic item (Col. 1, Lines 11-14).

## **VI. ISSUES**

There are four basic issues on appeal. The first issue is whether or not it would have been obvious to one of ordinary skill in the art to modify the teaching of Kamen et al. (EP 626354) with the teaching of Kume et al. (U.S. Patent No. 5,578,365) to create a method for making a glass panel having one or more decorative strips simulating strips of metal by applying raised beads of acrylic resin with an X-Y plotter, air curing the resin at room temperature, and applying metal film to the surface of the resin.

The second issue is whether or not it would have been obvious to one of ordinary skill in the art to modify the teachings of Kamen et al. and Kume et al., and further in view of Burzlaff et al. (U.S. Patent No. 4,484,970), and further in view of Preisler et al. (U.S. Patent No. 6,132,662) to create a method for making a glass panel having one or more decorative strips simulating strips of metal by applying raised beads of resin with an X-Y plotter, air curing the resin and further applying an aluminum or chrome metal film to the raised beads.

The third issue is whether or not it would have been obvious to one of ordinary skill in the art to modify the teaching of Hirahara (U.S. Patent No. 4,053,344) in view of Kamen et al. and Kume et al. to create a method for making a glass panel having one or more decorative strips simulating strips of metal by applying raised beads of acrylic resin with an X-Y plotter, air curing the acrylic resin at room temperature, and applying metal film to the surface of the resin.

The fourth issue is whether or not it would have been obvious to one of ordinary skill in the art to modify the teachings of Hirahara, Kamen et al. and Kumen et al., and further in view of Burzlaff et al. and Preisler et al. to create a method for making a glass panel having one or more decorative strips simulating strips of metal by applying raised beads of acrylic resin with an X-Y plotter, air curing the resin, and further applying an aluminum or chrome metal film to the raised beads.

This Board is being asked to review and reverse the Examiner's rejection of Claims 15 and 17-19 under 35 U.S.C. § 103(a).

## **VII. GROUPING OF CLAIMS**

Claims 15 and 17-19 may be considered together.

## **VIII. ARGUMENTS**

### **A. Rejections Under 35 U.S.C. § 103**

It is the burden of the Examiner to establish a prima facie case of obviousness when rejecting claims under 35 U.S.C. §103. In re Reuter, 651 F.2d 751, 210 USPQ 249 (CCPA 1981). The CAFC (and the CCPA before it) have repeatedly held that, absent a teaching or suggestion in the primary reference for the need, arbitrary modifying of a primary reference or combining of references is improper. The ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). In re Gieger, 815 F. 2d 686, 688, 2 USPQ2d 1276, 1278 (Fed. Cir. 1987).

**1. Kamen et al. and Kume et al. Cannot Properly Be Combined To Reject Claims 15 and 17.**

The Examiner has failed to establish a prima facie case of obviousness under 35 U.S.C. 103(a). The prior art simply does not teach Applicant's invention when taken alone, or when combined as proposed by the Examiner. First, the Examiner misstates what the primary reference, Kamen et al., teaches. Nowhere does Kamen et al. teach or suggest the application of a raised rounded "bead" of anything, not even ink. In fact, the word "bead" appears nowhere in Kamen et al. Further, given the generally recognized definition, or normal meaning, of the word, Kamen et al.'s painting, silk screening, or stenciling could not and would not, in fact, form a bead. There is simply no reference, or combination of references, which show the heart of the applicant's invention in which a raised rounded bead of resin is applied in a prescribed manner and covered by a metal film to simulate metallic strips. A layer of ink cannot be equated to raised rounded beads of resin.

Second, the Examiner makes a further assumption, i.e. that one of ordinary skill in the art would readily appreciate that the ink applied by Kamen et al. would have a rounded shape due to surface tension on the surface of the ink. While there may be some slight rounding or tapering effect, it would not rise to the level of a "bead" 0.8-1.1 mm in height and 2.0-5.5 mm in width. This is a very noticeable bead. Applicant respectfully submits that not only does the Examiner misunderstand Applicant's invention, he also does not understand his own primary reference. One cannot silk screen a raised bead. The ink must be very viscous to flow through the small pores of a silk screen. One of ordinary skill in the art simply would not expect painted or silk screened surfaces to be visibly rounded. Further, there is no basis in any reference, and the Examiner has not pointed to any, even remotely, that the ink applied in Kamen et al. would have

sufficient surface tension, i.e., a tendency to minimize its surface area, which would yield the ink susceptible to measurable distortion.

The Examiner next attempts to modify Kamen et al. with the teaching of Kume et al. to show that computer-driven X-Y plotters are well known in the art for applying an ink “bead” (again misstated). Applicant submits that Kume et al. never teaches the application of a bead or anything similar to a bead. In a section of the specification of Kume et al. that the Examiner highlighted and relies on in Kume et al. (Col. 8, Lines 29-35), Kume et al. states:

An ink sheet such as a print ribbon, etc. which is necessary in the case of forming a pattern by a printer such as an X-Y plotter, a wire dot type printer, a heat transfer type printer, an impact type printer, an ink jet type printer, etc. can be formed by applying a support substrate comprising a film, a cloth, etc., with the ink by a coating method, an impregnation method, etc....

Applicant submits that an informed reading of this portion of Kume et al. clearly indicates that Kume et al. refers to a plotter of the X-Y printer variety of printers that may be used to apply ink to a substrate from a sheet such as print ribbon. The X-Y plotter of Kume et al. is apparently used to apply the upper ink pattern 2, not the resin substrate 1 or 3. The Examiner provides no explanation, nor can Applicant conceive of one, how or why the X-Y printer of Kume et al. could possibly be used by Kamen et al. to even print on Kamen’s glass substrate, much less to apply Applicant’s raised bead. Again, one will not find anywhere in Kume et al. any reference to a raised bead of acrylic resin, nor anything else applied on glass with an X-Y plotter.

Next, the Examiner asserts that the curing of acrylic inks at ambient conditions is well know, but yet produces not a single reference to show this. The Examiner’s assertion that unexpected results must be shown with this method is therefore misplaced.

Applicant agrees with the Examiner that Kamen et al. does not recite specific dimensions of the applied ink. Why would he for a decorative design on a cup, plate, or glass?

Aesthetically, the applicant would assert that the thinner the better; Kamen et al. would not want raised ink surfaces, much less raised beads. Further, the Examiner asserts that that the range of dimensions claimed by the applicant might yield a flat pattern. Applicant again respectfully disagrees. As ink bead having a height of 8.0 mm and a width of 5.0 mm, as claimed is not flat.

With respect to Claim 17, the Examiner simply “writes off” and ignores the claimed limitations of hardness, curing time, etc. for Applicant’s method of curing the raised beads as being within the purview of the ordinary skilled artisan. There are simply too many assumptions that claim limitations are within the ordinary skill of those in the art. In short, every limitation that the Examiner cannot find in the art has been deemed to be obvious to one of ordinary skill in the art, and those limitations that he did find in the art have not been properly combined. With respect to what the Examiner did find, the Federal Circuit has stated:

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. \* \* \* Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor’s disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight.

*In re Dembiczak*, 50 USPQ2d 1614, 1617.

The Federal Circuit has also stated that:

It is impermissible to use the claimed invention as an instruction manual or “template” to piece together the teachings of the prior art so that the claimed invention is rendered obvious. This court has previously stated that “[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.

In re Fritch, 972 F.2d 1260, 23 USPQ 2d 1780, 1784 (Fed. Cir. 1992).



**2. Kamen et al. and Kume et al. Cannot Properly Be Combined with Burzlaff et al. and Preisler et al. To Reject Claims 18 and 19.**

The Examiner next proposes to further combine the teachings of Burzlaff et al. and Preisler et al. to show the application of specific metals, aluminum and chrome foils. Again, the Examiner asserts that one of ordinary skill would have appreciated using the foils of Burzlaff et al. and Preisler et al. First, Burzlaff et al. is directed to the application of decorative foil to plastic squeeze bottles. Applicant submits that applying a foil, either before or after the application of an “ink” design, which Burzlaff et al. permits (Col. 1, Lines 34-36) is simply not analogous to the application of an aluminum foil over a raised “bead” pattern of acrylic resin on glass.

Next, the Examiner looks to Preisler et al. to show the use of a chrome foil. Preisler et al. is also directed to the application of foil to plastic items, yet Preisler et al. involves the application of foil directly to a plastic outer surface (Abstract), such as an automobile dashboard component (Figures 1 and 2).

**3. Hirahara et al. Cannot Properly Be Combined With Kamen et al. and Kume et al. To Reject Claims 15 and 17.**

The Examiner attempts an alternative approach to the rejection of Claims 15 and 17 of the pending application under 35 U.S.C. 103(a). Also, again the Examiner fails to establish a prima facie case of obviousness.

Once again, the Examiner misstates the teachings of the prior art. The Hirahara reference does not teach printing an ink “bead” in a prescribed pattern. To the contrary, Hirahara solves the problem of irregular surface imperfections to achieve a smooth and uniform deposit of ink to

conform to even a non-uniform substrate (Col. 1, Lines 15-21 and Col. 2, Lines 4-7). A “smooth surface” is not a bead. This actually teaches away from rounded beads. The word “bead” or any equivalent thereof is also not to be found in Hirahara. The Examiner next inserts the word “air” to the curing process of Hirahara; however, Hirahara does not use that word to describe the curing process.

Next, the Examiner assumes that ink, capable of use in the conventional silk screen process is equivalent to the acrylic resin of Kamen et al., but provides no material art or chemical art explanation or evaluation as to why such an assertion is made. Indeed, there is no explanation or justification. The Examiner simply relies, once again, on the unfounded conclusion that such a substitution/modification would be well known in the art. Applicant respectfully disagrees. Again, also, the Examiner relies upon the X-Y plotter (printer) of Kume et al., which is intended to transfer print from a sheet or ink ribbon, to modify the silk screen process of Hirahara. The Examiner provides no explanation how or why this could be done, or why there would be any motivation whatsoever to do so. The applicant submits that such a modification is not compatible with Hirahara’s printing process. In re Gordon, supra.

Lacking Applicant’s key dimensions in his primary reference, the Examiner again relies on the ordinary skill of one in the art to obviously fill in the missing limitations of the raised height and width of the ink “bead” (again the Examiner misstates, as Hirahara does not teach a beaded pattern, but rather a smooth surface). Then the Examiner asserts the same basis (obviousness to one of ordinary skill in the art) as a cure for the duration of curing and hardness of the resin, prior to application of the foil to create Applicant’s claimed invention.

4. Hirahara et al., Kamen et al., Kume et al., and Preisler et al.

The Examiner asserts the same rationale as before for rejecting Claims 18 and 19; therefore, the Applicant has the same comments relative to Preisler et al. and Burzlaff et al. It is noteworthy also that the Examiner must now rely on a combination of five references, although improperly combined, to compile some of the limitations of Applicant's claimed invention.

**B. Conclusion**

Since the Examiner's rejection of the claims based on the prior art has been shown to be inappropriate, the rejection should be reversed and the case remanded to the Examiner for allowance of pending claims 15 and 17-19. Such action is earnestly solicited.

Respectfully submitted,



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Date: 12-29-03

File No.: 2643-033B

## APPENDIX

### Claims in the Application:

15. A method for making a glass panel having one or more decorative strips thereon which simulate strips of metal in a decorative pattern, comprising:

- (a) applying with an X-Y plotter a raised rounded bead of air-curable acrylic resin in a prescribed pattern to at least one surface of the panel, the rounded bead being 0.8–1.1 mm in height above the surface of the glass panel at the highest point and 2.0-5.0 mm in width;
- (b) air curing said acrylic resin; and
- (c) applying a metal film to said raised bead of acrylic resin at a temperature sufficient to bond said metal film to said raised bead of acrylic resin.

17. The method of Claim 15 wherein said acrylic resin bead is air-cured at room temperature for 24 to 48 hours until reaching a hardness of 65% on a 0% to 100% durometer scale when a 1.0 mm flat point needle is completely compressed against said resin bead for 3 seconds, creating a force of 10 Newtons at the needle.

18. The method of Claim 15 wherein the metal film is aluminum which is applied by pressing the film against said raised bead of acrylic resin with a rubber roller heated to a temperature in the range of 300° F to 380° F.

19. The method of Claim 15 wherein the panel is intended for exterior use and the metal film is chrome which is applied by pressing the film against said raised bead of acrylic resin with a rubber roller heated to a temperature in the range of 350° to 430° F.